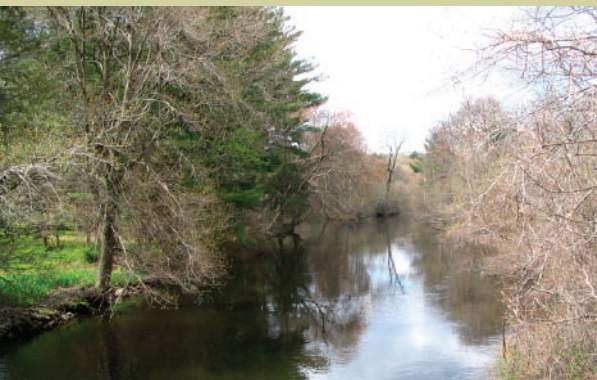


Blackstone Canal Preservation Study



Sponsored by:

John H. Chafee
Blackstone River Valley
National Heritage Corridor Commission
Woonsocket, RI

Worcester Historical Museum
Worcester, MA

September 2005

Blackstone Canal Preservation Study Executive Summary

Blackstone, Millville, Uxbridge,
Northbridge, Grafton, Sutton, Millbury,
and Worcester,
Massachusetts

Prepared for

Worcester Historical Museum

30 Elm Street
Worcester, MA 01609
508-753-8278

**John H. Chafee Blackstone River Valley National Heritage Corridor
Commission**

One Depot Square
Woonsocket, RI 02895
401-762-0250

Prepared by

***VHB*/Vanassee Hangen Brustlin, Inc.**

Transportation, Land Development, Environmental Services
101 Walnut Street, P.O. Box 9151
Watertown, MA 02471
617-924-1770

September 2005

Executive Summary

Overview

In 1986 the Blackstone River Valley in Massachusetts and Rhode Island was recognized as a special place and designated as a National Heritage Corridor by the U.S. Congress. With this designation, the Blackstone River Valley National Heritage Corridor Commission (BRVNHCC) was appointed to oversee the Corridor's operations in accordance with the National Park System's (NPS) tradition of management of cultural and natural resources. The BRVNHCC works in partnership with a variety of Federal, State and local agencies, and non-profit and private organizations to preserve the historic and environmental elements of the Valley's landscape, and to seek opportunities for investment in the Valley's historic mill villages and revitalization of its river system. Among the key goals of the Commission are to:

- Tell the story of the American Industrial Revolution by shaping experiences for visitors and making the story accessible to large numbers of people;
- Promote preservation and new life for the Valley's older village centers, mills, and other historic resources;
- Assist local communities in balancing conservation and growth; and
- Reaffirm an active commitment to improving the health of the River system.

The subject of the Blackstone Canal Preservation Study (the Study) is the portion of the Blackstone Canal in Massachusetts extending from Blackstone, MA to Worcester, MA. Constructed between 1824 and 1828, the Blackstone Canal connected Worcester, MA and Providence, RI. Though superseded as a transportation route by the construction of the railroad in 1847, many remnants of the Canal remain discernible along its route through Massachusetts. The purpose of the Study is to support the BRVNHCC mission to promote preservation of historic resources in the Blackstone River Valley and tell the story of the American Industrial Revolution in the region.

The goals of the Blackstone Canal Preservation Study are to facilitate a better understanding of the character and condition of the extant segments of the Blackstone Canal in Massachusetts; to assess opportunities for preservation, restoration, and interpretation of the Canal and its history; and to recommend key segments for such action. The Study includes the following elements:

- Inventory and comprehensive mapping of the existing and historic location of the Blackstone Canal and associated historic and archaeological resources,
- Narrative documentation of the existing conditions of canal resources,

- Identification of key canal segments in Massachusetts that offer outstanding opportunities for preservation, restoration, and interpretation of the history of the Blackstone Canal and the Blackstone River Valley, and
- Preliminary tasks and cost estimates associated with recommended restoration efforts.

Study Area

The portion of the Blackstone Canal in Massachusetts extends approximately 27.5 miles from the Rhode Island state line in the Town of Blackstone to the Canal's northern terminus in the City of Worcester, passing through the cities and towns of Blackstone, Millville, Uxbridge, Northbridge, Grafton, Sutton, Millbury, and Worcester (Figure 1).

The Study Area includes the path of the Canal and its associated engineering resources (locks, bridges, etc.), as well as adjacent mill buildings, homes and villages surrounding mill sites, and natural bodies of water used to sustain the Canal's water supply.

Planning Process

Resource Inventory and Mapping

A Resource Inventory and Existing Conditions assessment was conducted based upon existing data inventories, consultation with staff from the BRVNHCC, and consultation with local historians and stakeholders. The documentation of extant canal resources and their condition is based on the 1995 National Register of Historic Places Registration Form (NR form) for the Blackstone Canal Historic District in Massachusetts.

After the initial refinement of the location of the Blackstone Canal, the canal path and significant associated historic and archaeological resources identified in the NR form for the Blackstone Canal Historic District were mapped using a Geographic Information System format. The resulting maps show the following information for each of the eight Massachusetts towns containing remnants of the Blackstone Canal:

- Where the Canal is located in the Blackstone River or other water bodies;
- Where it is no longer visible;
- Where it is partially visible;
- Where it is clearly visible; and
- Where the Canal is visible and watered.

Public Workshop

A public workshop was held in February 2005 with representatives from the eight Massachusetts communities containing the Blackstone Canal to solicit input on the accuracy of the Resource Inventory and mapping and to gather suggestions for areas in their communities where the Canal could be preserved and made publicly accessible. The workshop resulted in a list of 28 suggested sites for future preservation and accessibility.

Canal Segment Selection Methodology

Selection of outstanding segments of the Blackstone Canal in Massachusetts for further study was a phased process relying on public input from Blackstone Canal corridor communities, input from BRVNHCC staff, and assessment of the Resource Inventory and Existing Conditions summary. Where feasible, field inspections were conducted for sites suggested by the public. Canal segments were reviewed and rated based on the following criteria:

- The state of preservation of the canal segment and associated resources,
- The rarity of survival of the Canal or associated features relative to the entirety of the Canal in Massachusetts or the community within which the segment was located,
- The level of protection afforded to the resource via ownership or management status,
- Current and potential public access, and
- Restorative and interpretive opportunities.

In selecting key canal segments for restoration, emphasis was put on those segments of the Canal that were well-preserved (i.e. visible and/or watered), that were unprotected through public ownership or conservation or preservation restrictions, that were presently or would soon be publicly accessible, and that included resources associated with important historic contexts in the Blackstone River Valley.

Summary of Recommendations

Key Canal Segments for Restoration

Based on the selection methodology outlined above, five segments of the Blackstone Canal were put forward for further evaluation for protection, stabilization and restoration. These segments were identified as offering outstanding opportunities for preservation, restoration, and interpretation by virtue of their high degree of integrity, unprotected status, accessibility to the public, proximity to other protected



segments of the Canal, and high interpretive value. The five selected segments include:

Millville Lock Area, Millville

The Millville Lock Area in Millville comprises a 0.5-mile length of dry canal trench and well-preserved towpath berm beginning in the east at the Millville Lock unit of the Blackstone River and Canal Heritage State Park and extending west to the Central Street Bridge over the Blackstone River.

The Millville Lock is currently interpreted as part of the Blackstone River and Canal Heritage State Park, however there is no formal public access or interpretation for the extant segment of the Blackstone Canal adjacent to the Lock. The well-preserved section of the Blackstone Canal near an established interpretive site presents a prime opportunity to expand interpretive programming. The Canal in this area would also lend itself well to future restoration and re-watering efforts, as it is structurally intact and close to the source of water provided by the Blackstone River.

Skull Rock Area, Uxbridge

The Skull Rock Area of the Blackstone Canal is comprised of a 0.5-mile segment of watered and dry canal trench and intact towpath berm in the vicinity of Old Millville Road in Uxbridge. The Area begins in the south at a bend in the Blackstone River off Old Millville Road where the Canal leaves the river and enters an engineered trench, and ends in the north near the crossing of Millville Road (Route 122).

The Skull Rock Area presents outstanding opportunities for interpretation of notable engineering features along the Canal such as the Skull Rock Lock and Skull Rock Bridge, as well as potential for restoration of the Skull Rock Lock. In addition, the watered segment of the Canal remaining in place at Skull Rock could be reopened to water flow for interpretive and recreational use.

Plummer's Landing-Riverdale Mill Area, Northbridge

The Plummer's Landing-Riverdale Mill Area comprises a 0.8-mile segment of watered canal and visible towpath northwest of the Plummer Corner section of Northbridge. The Area begins in the south at the north bounds of the Plummer's Landing unit of the Blackstone River and Canal Heritage State Park off Church Street and ends in the north at the Riverdale Mill on Riverdale Street.

The Plummer's Landing-Riverdale Mill Area presents a prime opportunity for restoration of the dry segment of the Blackstone Canal between Church Street and Riverdale Street and the potential restoration of the former basin at Plummer's Landing. The Canal in the Plummer's Landing-Riverdale Mill Area also appears to be a feasible site for restoration and re-watering efforts, as it is structurally intact and close to the source of water provided by the Blackstone River.



The greater public accessibility to the Plummer's Landing-Riverdale Mill Area of the Blackstone Canal with the completion of the Blackstone River Bikeway and its proximity to the Blackstone River and Canal Heritage State Park present a prime opportunity to continue the preservation and interpretive mission exemplified by the Heritage State Park. As a northern anchor to this segment, the Riverdale Mill presents an opportunity to interpret the industrial history of the Blackstone River Valley and the later uses of the former Blackstone Canal for power generation.

Fisherville Area, Grafton

The Fisherville Area of the Blackstone Canal in Grafton consists of a one-mile long segment of watered canal, visible towpath, and the remains of the Fisher Manufacturing Company in the mill village of Fisherville. The area extends from south of the Main Street (Route 122A) crossing of the Blackstone Canal and extends north of the site through the former Fisherville Mill Pond and marshes and west through a watered canal segment to Pleasant Street.

The Fisherville Area offers opportunities for interpretation of the rise and decline of local industry through the Fisherville Mill and the cultural landscape of the mill village of Fisherville. The planned redevelopment of the Fisher Manufacturing Company site and the current local planning efforts surrounding the Blackstone River and Fisherville Mill Pond present a prime opportunity to restore a pivotal segment of the Blackstone Canal in Grafton, reconnecting the open, navigable watered sections of the Canal north and south of Main Street. In addition to reopening a covered section of the Canal, the potential exists to preserve, interpret, and possibly restore remnants of Lock #30 which may be extant on the covered section of the Canal on the site.

Cross Road-Grafton Street Area, Millbury

The Cross Road-Grafton Street Area of the Blackstone Canal consists of dry canal trench and visible towpath beginning in the south at the Millbury-Sutton town line near Cross Road and Grafton Street. This approximately one-mile long segment of the Blackstone Canal passes through a largely undeveloped portion of the east side of the town and constitutes the only visible segment of the Canal in the Town of Millbury.

The Cross Road-Grafton Street Area offers opportunities for restoration, interpretation, recreation, and greater public access to the Blackstone Canal. The well-preserved condition and proximity to water in the Blackstone River at both ends of the segment make it a potentially feasible site for re-watering. There is also an opportunity to restore a key feature of the Blackstone Canal with the visible remains of Lock #35. The Cross Road-Grafton Street Area will soon become partially publicly accessible via completion of the Blackstone River Bikeway, and there is the potential for even greater public access via a system of walking trails along the Canal in this largely undeveloped area of Millbury.

Segments for Future Action

In addition, the following five segments were identified for consideration in a second phase of planning and study to be conducted in the future:

- Blackstone Manufacturing Company Area, Blackstone
- Leland's Landing Area, Grafton
- Depot Street-Chase Road Area, Sutton
- Millbury-Winnipeg Street Area, Worcester
- Brosnihan Square-Hurley Square Area, Worcester

These segments meet many of the criteria used to select the key segments for restoration and should be priority areas for preservation, public access, and interpretation in the future. Several of these sites pose preservation, access, or restoration challenges that make them less feasible for immediate action, while others do not require substantive restoration efforts.

General Recommendations

While each of the key segments of the Blackstone Canal in Massachusetts proposed for restoration is unique, a phased set of general recommendations has been developed to be applied to each segment. The general recommendations include a phased program of short-term preservation and protection; mid-term stabilization, maintenance, and management; and long-term rehabilitation and interpretation. The general recommendations address issues such as land or easement acquisition, facilitation of public access to canal segments, and further study regarding historic restoration and interpretation opportunities.

It should be emphasized that the recommendations in this Study are preliminary, and additional, site-specific research and planning activities will need to be completed prior to implementation. Such activities should take into consideration impacts to natural and historic resources, including known and potential archaeological sites, through research and/or survey. Further environmental study will ensure that important resources are not harmed and that all rehabilitation or restoration activities comply with applicable state and federal laws. In addition, information gained from a deeper understanding of each site's natural, historic, and archaeological resources will inform the treatment plan and enhance interpretive opportunities.

Protection and Preservation

Though there have been many efforts made over the past 30 years to preserve and protect the Blackstone Canal from adverse impacts, at present, the major portion of the Canal in Massachusetts remains in private ownership with no real protection

from demolition, natural deterioration, or inappropriate abutting development and no public access.

Providing protection of the most intact, well-preserved segments is the first step in facilitating future restoration and interpretation efforts. A concerted and cooperative effort between the BRVNHCC, state entities, municipalities in which the Canal is located, private organizations with preservation or conservation missions, and property owners should be undertaken to ensure sensitive treatment and long-term management of, and public access to, the Canal's most intact and well-preserved segments.

The strongest measure to ensure public access and appropriate treatment and management of extant segments of the Blackstone Canal is acquisition in fee simple, or acquisition of an interest in the property through an easement by donation or with federal, state, or local funds. In circumstances where acquisition is not feasible or appropriate, alternatives such as preservation or conservation restrictions, establishment of a local historic district or conservation district, zoning overlays, corridor protection bylaws or ordinances, or transfer of development rights provisions can be pursued. This is recommended for all well-preserved, extant sections of the Canal as identified in the Resource Inventory and Existing Conditions section of the Study, regardless of interpretive opportunity or public access.

Stabilization and Management

Though the key segments of the Canal recommended for restoration as part of the Study remain in a recognizable state, most are in need of stabilization and planning for ongoing management and maintenance. As segments of the Canal are planned for protection and future actions, resource management plans should be implemented at the corridor and local levels to assist stewards of the Canal in this work. The resource management plans should guide both routine operation and long-term decisions and planning concerning the use, interpretation, study, and preservation of the Canal, and provide the means to make informed decisions concerning future stewardship of key canal segments, with identified strategic objectives, achievable goals, and concrete action items. The plans should be completed prior to the commencement of rehabilitation or restoration activities and should take into consideration potential impacts to natural, historic, and archaeological resources.

Rehabilitation, Restoration, and Interpretation

The long-term goal for the five key segments of the Blackstone Canal identified by the Study is to rehabilitate or restore the canal structure and associated features in these locations in support of the preservation and interpretive goals of the BRVNHCC. This Study makes preliminary recommendations for potential restoration and rehabilitation of key canal segments and features as well as preliminary recommendations for interpretive opportunities. Rehabilitation or



restoration tasks could include restoration of key features such as lock structures and water control gates, opening covered or hidden sections of the Canal, rebuilding damaged or destroyed towpath sections, and re-watering dry sections of extant Canal. Additional, site-specific research and planning activities will need to be completed prior to implementation of any rehabilitation, restoration, or interpretive activities. Such research and planning should take into consideration potential impacts to natural, historic, and archaeological resources to ensure that these resources are not harmed and that all rehabilitation or restoration activities comply with applicable state and federal laws.